

Purdue University

Purdue e-Pubs

Historical Documents of the Purdue
Cooperative Extension Service

Department of Agricultural Communication

6-1-1967

Health Measures in the Purdue Dairy Herd

J. L. Albright

C. J. Callahan

P. N. Boehm

B. W. Butcher

H. M. Nelson

Follow this and additional works at: <https://docs.lib.purdue.edu/agext>

Albright, J. L.; Callahan, C. J.; Boehm, P. N.; Butcher, B. W.; and Nelson, H. M., "Health Measures in the Purdue Dairy Herd" (1967). *Historical Documents of the Purdue Cooperative Extension Service*. Paper 512.

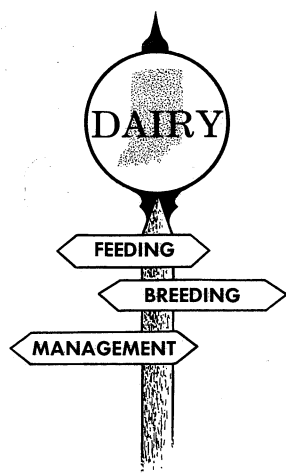
<https://docs.lib.purdue.edu/agext/512>

For current publications, please contact the Education Store: <https://mdc.itap.purdue.edu/>

This document is provided for historical reference purposes only and should not be considered to be a practical reference or to contain information reflective of current understanding. For additional information, please contact the Department of Agricultural Communication at Purdue University, College of Agriculture:

<http://www.ag.purdue.edu/agcomm>

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.



Health Measures in the Purdue Dairy Herd

J. L. Albright, C. J. Callahan, P. N. Boehm, B. W. Butcher, H. M. Nelson, and H. E. Amstutz
Departments of Animal Sciences and Veterinary Clinics

Since herdsmanhip is a life cycle process, as much attention should be paid to the calves as to the milking herd. The following is an outline of health measures practiced at the Purdue University Dairy Farm.

1. The pregnant cow

Normally, the pregnant cow, pending parturition (1-3 days) is placed in a clean, well-bedded box stall. In periods of good weather (May to November) many of our cows calve in the grove west of the barns and on the pasture north of the barns.

If a mature cow has been in unproductive labor for over 1 hour, the herdsman is called. It is not uncommon for first calf heifers to labor for longer periods of time, but if a heifer is in unproductive labor for 2-3 hours, the herdsman is notified.

Certain cows appear to prefer isolation and minimal interference, and therefore, should not be bothered excessively. It is the herdsman's responsibility to evaluate the situation and seek veterinary assistance in cases of true dystocia (difficult calving).

Following parturition, the cow remains in the box stall until she has dropped the placenta and is beyond danger of complications. The afterbirth is removed from the pen with a pitchfork. Often cows are inclined to eat placental membranes which are not too digestible and difficult to swallow. Any cow that is not definitely known to have "cleaned" (expulsion of fetal membranes) is examined

by a veterinarian and handled according to existing conditions.

2. The calf

As soon as possible following birth, the calf's navel is treated with tincture of iodine (7%). The iodine is either poured into or onto the umbilicus or else the navel is dipped into the iodine.

The calf is permitted to remain with the dam until it has had ample time to nurse (usually 18-24 hours) and thereby receive colostrum. If the calf has to be separated from the dam immediately following parturition, it is imperative that the calf be fed colostrum from its dam. If fresh colostrum is not available, frozen colostrum is obtained from the herdsman in charge.

When a calf is removed from the dam, it is the responsibility of the herdsman to assign and attach a number to the calf for identification.

The usual recommendation for feeding calves is whole milk or equivalent milk substitute at the rate of 1 pound of milk per 8-10 pounds of body weight of the calf. This volume is divided into two daily feedings.

The calf at approximately one week of age, is offered fresh quantities (less than a pound) of calf starter grain ration and good quality, leafy grass-alfalfa hay daily. This procedure is altered if the calves are on experiment. Precautions are taken to prevent

enteritis (scours) and pneumoenteritis. Calves which are destined for herd replacements are continued on milk or suitable milk substitute for about 40 days or such time as directed by experimental procedure. Usually when a calf is consuming a minimum of a pound of calf starter each day, the calf is weaned from milk or milk substitutes.

3. Replacement young stock

At as early an age as possible, calves are dehorned by suitable humane methods (electric dehorner). This is usually done between two weeks and two months of age. At this time, all heifers are checked for supernumerary (extra) teats, and these are removed. Calves are identified by suitable means such as ear tags, tattooing, or both. Vaccination with Brucella Strain 19 vaccine is carried out at as near 4 months as possible and prior to 8 months of age.

The breeding time for heifers is determined by weight rather than age. These weights are as follows: Holstein - 750 to 850 pounds, Jersey - 500 to 600 pounds, and Red Danish - 600 to 700 pounds. No heifers are bred from May 1 to November 1 while on pasture. Special considerations are made to increase the percentage of fall calvings and to have the majority of the Purdue herd calving during late August through November. This is to take advantage of higher milk prices. Any heifer not bred by 20 months and diagnosed pregnant by 22 months of age should be culled. The heifer is examined before pronouncing her sterile.

4. Pregnancy and sterility examinations

All cows and first calf heifers are examined 30-60 days post partum to evaluate conditions for re-breeding. Any condition existing that is not suitable for re-breeding is treated so these animals are in breeding condition by 60-90 days post partum. All cows and bred heifers are examined 35-60 days after breeding to determine pregnancy status. Any animal that has been bred twice and returns to estrum is examined by the

veterinarian in charge prior to rebreeding to determine, if possible, the cause of the repeat breeding. Treatment where needed is carried out.

The objective of this program is to maintain fall calving with a 12-13 month calving interval as near as possible. Milk production is a by-product of the reproductive process. With two cows calving, one with a 12-month calving interval and the other with a 15-month interval, the first will have completed five lactations (plus 5 calves) at the same time the other cow has completed four lactations.

It is the responsibility of the herdsman and veterinarian in charge to carry out preventive measures, conduct tests, and endeavor to prevent the occurrence of venereal and reproductive disease conditions.

Watch for cows in heat. Look for cows in heat. Find cows in heat.

Cows in heat (estrus) are generally nervous. During estrus the vulva may be swollen, reddened and moist in contrast to a dry, wrinkled appearance when not in heat. A thin, watery, stringy mucus is often seen hanging from the vulva. The female bovine will mount other animals or stand for mounting by herd mates. Silent heat periods are a problem. At the expected time animals must be watched carefully so the occurrence of heat will not be missed. All breedings are on an A.I. (artificial insemination) basis. Frozen semen is kept in the liquid nitrogen tank in the herdsman's office. A folder listing the identity of all herd sires used in the Purdue dairy herd is available in the herdsman's office.

5. Mastitis

The prevention and control of mastitis is dependent upon a number of factors including: (1) Good milking procedures which include proper washing, priming, and drying with clean paper towels, (2) A properly

functioning and adjusted milking machine, (3) A conscientious, properly trained and instructed operator, (4) Healthy cows, (5) Cow comfort with bedding according to need and proper restraint in handling and working in the milking parlor. Under some experimental conditions, and with the use of part-time student help, some of these fundamentals are difficult to maintain. It is a joint responsibility of the attending veterinarian and herdsman to observe milking procedures, see that the milking machines are functioning properly and that the accepted mastitis preventive measures are carried out. Any deviation from the above routine is called to the attention of the herdsman. The proper instruction and supervision of the milking personnel is the responsibility of the herdsman. (6) Routine dry cow treatment with antibiotics as related to types of microorganism is practiced, and (7) The California Mastitis Test (CMT) is conducted monthly on the individual quarters of each milking cow. This test is an indirect measure of udder irritation and leucocyte counts.

6. Sanitation

Good management includes the practicing of good sanitation procedures. The barns, barnyards, and other adjoining facilities are kept tidy and clean. If manure and waste feed were allowed to pile up for one week, flies would hatch and become a problem and a nuisance. Gutters and free stalls are cleaned daily and the manure properly disposed. Maternity and calf pens are cleaned as frequently as necessary.

When calves are removed from the individual calf pens, the pen is thoroughly cleaned, disinfected (limed) and, if necessary, painted (with a non-lead base type) prior to further use.

Mangers and watering devices are cleaned as often as necessary to assure sanitary feeding and watering facilities for the livestock.

Liquid manure tanks are covered with the metal plates that are provided.

7. General disease prevention

Routine testing procedures for diseases such as brucellosis and tuberculosis are carried out annually. Testing for other disease and parasitic conditions are carried out whenever and as frequently as conditions indicate. Vaccinations for leptospirosis are given annually and for other potential diseases as needed. Prophylactic measures, immunizations, and magnets are used as needed.

Assembling the dairy herd with other livestock, and other unnecessary exposures are avoided except for teaching and other obligations of the University.

Rodent and bird control and the control of other potential vectors of disease are carried out to the fullest possible extent. Warfarin and 1080 are used for rodents. Anhydrous ammonia liberated as a gas is used to eliminate birds from barns and grain bins.

8. Herd health records

Extensive records are kept in the herdsman's office; daily calendar of events, individual books with breeding and calving dates, and monthly summaries of the herdsman's report are available. Dairy Herd Improvement Association records are available soon after test day, and individual daily milk production figures are assembled by the milkers and placed on the Purdue Milk Card.

Herd health folders for individual animals are maintained and kept in file boxes in the Dairy Barn Office. The colored tab system is used in each folder as follows: Black, placed on month of calving. Fresh cows not settled; Yellow, cows to be checked by veterinarian, usually for post-calving

check and placed on month to be checked;
Red, placed on the month to be bred --
watched closely for heat detection; Blue,
cows to be examined for pregnancy by veter-
inarian and placed on month to be checked;
Green, cows diagnosed pregnant -- placed on

month she is due to calve. Green tab serves
as reminder to turn the cow dry to allow an
appropriate dry (rest) period before the date
she is due to calve.

Historic Document